WHAT IS CLAIMED IS:

1. A coarse carrier offset adapter for determining a coarse carrier offset for application to a received satellite signal, comprising:

an energy estimator configured to analyze, with respect to said received satellite signal, energies in bands on either side of a baseband as displaced by a coarse carrier offset; and

an offset adapter coupled to said energy estimator and configured to change said coarse carrier offset until said energies become substantially equal and provide said coarse carrier offset to a digital down converter for said application.

2. The adapter as recited in Claim 1 wherein said energy estimator uses a Goertzel algorithm to analyze said energies.

3. The adapter as recited in Claim 1 wherein said adapter uses a least means square algorithm to determine said coarse carrier offset.

4. The adapter as recited in Claim 1 wherein said energy estimator operates on a digitally sampled form of said received satellite signal.

5. The adapter as recited in Claim 1 wherein said received satellite signal is quadrature modulated and said adapter further comprises an energy estimator for both in-phase and quadrature components of said received satellite signal.

6. The adapter as recited in Claim 1 wherein said application of said coarse carrier offset brings an offset of said received satellite signal to within about 78 KHz.

7. The adapter as recited in Claim 1 wherein said adapter is embodied in a time division multiplexing satellite receiver.

8. A method of performing coarse carrier offset adjustment for application to a received satellite signal, comprising:

analyzing, with respect to said received satellite signal, energies in bands on either side of a baseband as displaced by a coarse carrier offset;

changing said coarse carrier offset until said energies become substantially equal; and

providing said coarse carrier offset to a digital down converter for said application.

9. The method as recited in Claim 8 wherein said analyzing comprises using a Goertzel algorithm to analyze said energies.

10. The method as recited in Claim 8 further comprising using a least means square algorithm to determine said coarse carrier offset.

11. The method as recited in Claim 8 further comprising digitally sampling said received satellite signal.

12. The method as recited in Claim 8 wherein said received satellite signal is quadrature modulated and said method further comprises analyzing both in-phase and quadrature components of said received satellite signal.

13. The method as recited in Claim 8 wherein said application of said coarse carrier offset brings any remaining offset of said received satellite signal to within about 78 KHz.

14. The method as recited in Claim 8 wherein said method is carried out in a time division multiplexing satellite receiver.

15. A time division multiplexing (TDM) satellite receiver, comprising:

a TDM antenna adapted to receive a quadrature modulated satellite signal;

an antenna radio frequency (RF) processor coupled to said TDM antenna;

an RF/intermediate frequency (RF/IF) processor coupled to said antenna radio frequency processor;

an analog to digital converter (ADC) coupled to said RF/IF processor;

first and second TDM demodulators; and

a digital down converter, interposing said ADC and said first and second TDM demodulators and having a coarse carrier offset adapter for determining a coarse carrier offset for application to said satellite signal, including:

an energy estimator configured to analyze, with respect to said satellite signal, energies in bands on either side of a baseband as displaced by a coarse carrier offset, and

an offset adapter coupled to said energy estimator and configured to change said coarse carrier offset until said energies become substantially equal and provide said coarse carrier offset to said digital down converter for said application.

16. The satellite receiver as recited in Claim 15 wherein said energy estimator uses a Goertzel algorithm to analyze said energies.

17. The satellite receiver as recited in Claim 15 wherein said adapter uses a least means square algorithm to determine said coarse carrier offset.

18. The satellite receiver as recited in Claim 15 wherein said adapter further includes an energy estimator for both in-phase and quadrature components of said satellite signal.

19. The satellite receiver as recited in Claim 15 wherein said application of said coarse carrier offset brings an offset of said satellite signal to within about 78 KHz.

20. The satellite receiver as recited in Claim 15 wherein an initial carrier offset of said satellite signal is as much as 1.4 MHz.